Brush Vs. Condit

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Brush v. Condit

No. 9

Argued October 15-16, 1889

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APPEAL FROM THE CIRCUIT COURT OF THE UNITED

STATES FOR THE SOUTHERN DISTRICT OF NEW YORK

Syllabus

Claims 1, 3, 5 and 6 of reissued letters patent No. 8718, granted May 20, 1879, to Charles F. Brush for "improvements in electric lamps," the original patent, No. 203,411 having been granted to said Brush May 7, 1878, are invalid by reason of their prior existence as perfected inventions in a lamp made in June, 1876, by one Hayes.

Although claims 5 and 6 speak of an "annular clamp," and the apparatus of Hayes had a rectangular clamp, the latter embodied the principle of the invention carried out by equivalent means, the improvement, if any, in the use of the circular clamp over the rectangular clamp being only a question of degree in the use of substantially the same means.

In equity for the infringement of letters patent. Decree dismissing the bill, from which the plaintiffs appealed. The case is stated in the opinion.

MR. JUSTICE BLATCHFORD delivered the opinion of the Court.

This is an appeal by the plaintiffs, Charles F. Brush and the Brush Electric Company, in a suit in equity brought by them in the Circuit Court of the United States for the Southern District of New York, against C. Harrison

Condit, Joseph Hanson, and Abraham Van Winkle, from a decree dismissing with costs their bill of complaint so far as it relates to reissued letters patent No. 8,718, granted May 20, 1879, to Charles F. Brush, one of the plaintiffs, for "improvements in electric lamps," on an application for a reissue filed April 14, 1879, the original letters patent, No. 203,411, having been granted

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to said Brush, May 7, 1878, on an application filed September 28, 1877. The rights of the plaintiffs were finally rested upon an alleged infringement of claims 1, 3, 5, and 6 of the reissue. Another patent was sued on in the case, but at the final hearing the bill in regard to it was dismissed with costs on motion of the plaintiffs. The opinion of the circuit court, held by Judge Shipman, on the merits as to reissue No. 8,718 is reported in 20 F. 826.

The specification of the reissue states the general nature of the invention in these words:

"My invention relates to electric light mechanism, and it consists in the following specified device, or its equivalent, whereby the carbon sticks usually employed are automatically adjusted and kept in such position and relation to each other that a continuous and effective light shall be had without the necessity of any manual interference."

In this automatic arrangement, the electric arc is established, and then, as the electrodes are consumed, the arc is regulated by causing the strength of the current and the length of the arc mutually to control each other. There is no clockwork or other extraneous power, but the action of the electric current alone effects the necessary movements. The electrodes tend to move toward each other at all times, and this tendency is opposed by the electromagnetic action, which tends to separate them. These opposing forces are designed to be in equilibrium when the electrodes are at such a distance from each other as will produce the maximum development of light with a given electric current. It was to an electric arc lamp of this character that the invention of Brush was to be applied. The construction of his arrangement, as described in the specification of the reissue, is as follows: a helix of insulated wire, such helix being in the form of a tube or hollow cylinder, rests upon an insulated plate upheld by a metallic post or standard. Within the cavity of the helix are contained an iron core and a rod which passes longitudinally and loosely through and within the core. This rod holds a carbon. The core is also made to move very freely within the cavity of the helix, and is partially supported by means of springs which push upward

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against ears attached to the core. A ring of metal just below the core surrounds the carbon holder and rests upon a floor or support. One edge of the ring is over a lifting tongue, which is attached to the core, while the opposite edge is a short distance below the crown of an adjustable set screw. The design is that one point of the ring may be lifted in such way as to clamp the carbon holder, while a limit is placed to the upward movement of the core. The poles of the battery being so attached that the circuit of an electric current is completed, the core, by the force of the axial magnetism, is drawn up within the cavity of the helix, and by means of the lifting tongue one edge of the ring is lifted until, by its angular impingement against the rod or carbon holder, it clamps such rod, and also lifts it up to a distance limited by an adjustable stop. While the ring preserves this angular relation with and impingement against the rod, the rod will be firmly retained, and prevented from moving through the ring. The adjustable stop is fixed so that it shall arrest the lifting of the rod when the two carbons are sufficiently separated from each other. While the electric current is not passing, the rod can slide readily through the loose ring and the core, and in this condition gravity will cause the upper carbon to rest upon the lower carbon, thus bringing the various parts of the device into the position of a closed circuit. If, then, a current of electricity is passed through the apparatus, it will instantly operate to lift the rod, and thus separate the two carbons and produce the electric light. As the carbons burn away, thus increasing the length of the voltaic arc, the electric current diminishes in strength owing to the increased resistance. This weakens the magnetism of the helix, and accordingly the core, rod, and upper carbon move

downward by the force of gravity until the consequent shortening of the voltaic are increases the strength of the current and stops such downward movement. After a time, however, the ring will reach its floor or support, and its downward movement will be arrested. Any further downward movement of the core, however slight, will at once release the rod, allowing it to slide through the ring until arrested by the upward movement of the core due to the

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increased magnetism. In continued operation, the normal position of the ring is in contact with its lower support, the office of the core being to regulate the sliding of the rod through it. If, however, the rod accidentally slides too far, it will instantly and automatically be raised again as at first, and the carbon points thus be continued in proper relation to each other.

Claims 1, 3, 5, and 6 of the reissue, on which alone recovery is sought, read as follows, there being eight claims in all in the reissue as granted:

"1. In an electric lamp, the combination, with the carbon holder and core, of a clamp surrounding the carbon holder, said clamp being independent of the core, but adapted to be raised by a lifter secured thereto, substantially as set forth."

"3. In an electric lamp, the combination of the core or armature, C, the clamp, D, and adjustable stop, D', or their equivalents, whereby the points of the carbons are separated from each other when an electrical current is established -- prevented from separating so as to break the current -- and gradually fed together as the carbons are consumed, substantially as described."

"5. In an electric lamp, the combination, with a carbon holder, of an annular clamp surrounding the carbon holder, said clamp adapted to be moved, and thereby to separate the carbon points by electrical or magnetic action, substantially as herein set forth."

"6. In an electric lamp, an annular clamp adapted to grasp and move a carbon holder, substantially as shown."

What is called in these claims "the clamp, D," is the ring of metal which surrounds the rod or carbon holder.

The specification of the reissue, as granted, contained the following paragraph:

"I do not limit myself narrowly to the ring, D, as other devices may be employed which would accomplish the same result. Any device may be used which, while a current of electricity is not passing through the helix, A, will permit the rod, B, to move freely up and down, but which, when a current of electricity is passing through the helix, will, by the raising of the core, C, operate both to clamp

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and to raise the rod, B, and thereby separate the carbon points, F, F', and retain them in proper relation to each other."

On the 14th of October, 1881, the plaintiffs filed in the Patent Office a disclaimer, in which they stated that the patentee had claimed more than that of which he was the first inventor or discoverer, by or in consequence of the use, in the specification, of the language contained in the paragraph last above quoted, and that there were material and substantial parts of the thing patented, also embraced within the terms of the above quoted paragraph, which were truly and justly the invention of Brush. The paper went on to enter a disclaimer to that part of the subject matter of the specification, and of claims 1, 2, 3, 5, and 6 of the reissue, which, being embraced within the general language of the above quoted paragraph, included as within the invention of Brush "clamping devices substantially different in construction and mode of operation from the clamp, D."

On the 6th of April, 1883, the plaintiffs filed in the Patent Office a disclaimer of so much or such part of the invention described in the reissue, and coming within the general language of the third claim, as might cover or include as elements thereof "the core or armature, C," and "the clamp, D," excepting when the core or armature raises the clamp by a lifter secured to such core or armature, substantially as described in the patent. The same paper disclaimed the specific combinations forming the subject matter of claims 2, 7, and 8.

Judge Shipman held that the first claim describes a clamp independent of -- that is, not fixed to -- the core, but adapted to be raised by a lifter secured to the core, and does not mean that the clamp is independent of, and not in any way dependent for its motion upon, the core, but is adapted to be raised by a lifter secured to itself. He further held that the first claim does not include the adjustable stop of the third claim, but includes only the combination of the clamp and core and rod, with the described elements which are necessary to cause an angular impingement upon the rod, and an intermittent downward feeding of the rod. He also held that the clamp of the sixth claim is not any annular clamp adapted to grasp and

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move a carbon holder, but means to describe in general terms the clamp of the first claim, which raises, clamps, and feeds downwardly the rod, preserving a practically uniform length of arc by the described means, or an annular clamp surrounding the carbon holder independently of the core, but adapted to be raised by a lifter secured to the core, and some suitable agency to allow the clamp to be tripped, and that the fifth claim includes the clamp of the first and sixth claims, the carbon holder, the motor, and the tripping device.

Judge Shipman examined the question of the novelty of claims 1, 3, 5, and 6, and arrived at the conclusion that they were invalid by reason of their prior existence, as perfected inventions, in a lamp made in June, 1876, by one Hayes at Ansonia, Connecticut. On this subject, he says in his opinion:

"The clamp, in combination with the other necessary elements, which was made by Charles H. Hayes, of Ansonia, Connecticut, and was a part of a lamp which he constructed about the end of June, 1876, as an improvement upon the White lamp, is the combination of the first and third claims of the Brush patent. The carbon rod was square or rectangular, and therefore was surrounded by a rectangular clamp which was independent of the core. It is not denied that this clamp is the equivalent of an annular clamp. It was raised by a lifter secured to the core, and was tripped by coming in contact with a floor, while the ascent of the rod was checked by the contact of the clamp with an adjustable stop."

"The plaintiffs' answer to the anticipatory character of this clamp is that it was an abandoned experiment, and never was a perfected invention. The facts in regard to its character and position as an invention are as follows: Mr. Hayes was in 1876, and has been continuously since, in the employ of Wallace & Sons, who are large manufacturers of brass goods in Ansonia. In 1876, this firm was trying to find a successful electric lamp to manufacture. Mr. White furnished them with his device, which they sent, as a part of their exhibit, to the Centennial Exhibition at Philadelphia. Mr. Hayes testifies as follows:"

"Experiments with the White lamp showed its defects so strongly or plainly that I designed this [the

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Hayes] lamp to overcome those defects. I made rough drawings in the middle or latter part of May, 1876. Commenced building the lamp at once, and finished it about the end of June following. Tested it, tried it, and made some minor alterations, and run it from time to time, when a lamp was needed, until the 16th of September following."

"At this time he was in Philadelphia, and a fellow employee by the name of King, thinking that he could improve upon the clutch and make the feeding of the carbons answer more promptly to changes of the current or make the feeding less 'jerky,' obtained permission from Wallace & Sons, who owned the clamp, to make an alteration. The 'King clutch,' constructed upon a different principle from that of the Hayes or the

Brush clamp, was but into the lamp, which has remained in use in the mill, and, since the end of 1876, has been 'used in the electrical room for testing machines, carbons, etc., and has been used for that purpose more or less ever since.' But one Hayes lamp was made until a duplicate specimen was made for use in this case. The Hayes clamp, it will be observed, was used in the lamp only until September 16th. Prior to that date, the use of the lamp with the original clamp is thus described by Mr. Hayes upon cross-examination: 'It [the lamp] was moved about and burned in different places -- in the mill and outside -- and it was also burned in our other shop occasionally.' This shop was known as the 'skirt shop,' the third floor of which was used for electrical work. The mill and skirt shop were ordinarily lighted by gas."

" Question. On what occasions did you use the lamp out of doors?"

" Answer. The lamp was used out of doors on several occasions. When gangs of men required light unloading freight from railway cars. Digging for some work connected with the water power. I am unable to specify positively any particular date, but have a general recollection of being frequently called upon to make a light for some such purposes."

" Q. Did you use it sometimes to test dynamos with in June-September, 1876?"

" A. I think not during that time."

" Q. What other use did you put it to during those months except the occasions out of doors which you have

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mentioned?"

" A. It was used about the mill, more particularly around the muffles, on occasions when it was necessary to work during the evening."

"The use was a public one, in the presence of the employees of the factory. The Hayes clamp has been preserved, and was an exhibit in the case. Wallace & Sons thereafter, after much experimenting, went, to a limited extent, into the manufacture of what were known in the case as 'plate lamps,' or lamps having two carbon plates instead of rods, but did not continue the business long. They say that the discontinuance was due to the fact that they did not have a satisfactory generator. The Hayes clamp was used upon the plate lamps, but, as has been said, was used upon but one carbon pencil electric lamp. The plaintiffs vigorously insist that the Hayes clamp was not a completed and successful invention, but that its use was merely tentative and experimental, and was permanently abandoned because the device did not promise to be successful."

"Two facts are manifest: 1st, that the Hayes clamp was the clamp of the Brush patent, and 2d, that it became, after September 16th, a disused piece of mechanism in connection with carbon points. The question then is was it a perfected and publicly known invention the use of which was abandoned prior to the date of the Brush invention, or was its use merely experimental, which ended in an abandoned experiment on September 16th?"

"The plaintiffs, in support of their view, say that Wallace & Sons were searching for a successful lamp and were exhibitors of an electric lamp at the Centennial Exhibition; that inventors were in their employ, who were encouraged to make experiments and trials in the hope that something good might be produced, and, under this stimulus, one Hayes lamp was made; that improvements in the location of the spring were made; then it gave a 'jerky' light, and, when the inventor was away, another clamp was put on by the permission of the owners to remedy this irregular feeding; but that afterwards no other lamp was ever constructed, and the Hayes clutch was left among other 'odds and ends,' and that the indifference with which it was received, its confessed faults, the attempted

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improvements, and its disuse show that the Hayes clamp never was anything more than an attempt to invent something which proved to be a failure."

"The question of fact in this part of the case must turn upon the character of the use of the lamp prior to September 16th, because it is established that the Hayes clamp and the Brush clamp, in its patented features, were substantially alike, and that the point in which they differ, *viz.,* the length of the arms, is not a part of the principle of the device. Was the lamp with this clutch used merely to gratify curiosity, or for purposes of experiment, to see whether the feeding device was successful, or whether anything more was to be done to perfect it? or was it put to use in the ordinary business of the mill, as a thing which was completed, and was for use, and was neither upon trial nor for show?"

"Hayes made the lamp for Wallace & Sons as an improvement upon the White lamp, and apparently turned it over to them to be used when they chose. An alteration was subsequently made in the location of the spring. The lamp was used at different times, in the work of the mill at night, indoors and out of doors. Its use at these times does not seem to have been for the purpose of testing the machine, or of calling attention to its qualities, or of gratifying curiosity, but it was used to furnish light to the workmen at their work. I have queried whether this use was not that of a thing which might be of help in an emergency, and which was thought to be better than nothing, though not of much advantage; but it was apparently used to accomplish the ordinary purposes of an electric light in a mill, to enable the workmen to see at night, although it was not uniformly used, because the mill was lighted by gas."

"But the plaintiffs press the question, why, then, was the further use of the Hayes clamp and lamp discontinued? This question is significant because the abandonment of a thing which is greatly wanted is ordinarily a very suggestive circumstance to show that it was defective, and that, before the invention could be completed, something was to be done which never was done. "

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"I think that Wallace & Sons did not push the electric lamp business because they had no generator, and I also think that the Hayes lamp, either with or without the Hayes clutch, did not impress them favorably, for they contented themselves with making only one specimen, whereas they made six White lamps, and, after much experimenting, and after the invention of the Hayes lamp, they made fifty or sixty plate lamps. For some reason, they did not manufacture the Hayes lamp, but turned away to the plate lamps. But the facts that the anticipatory device was the device of the patent, and did do practical work, and was put to ordinary use, and that it does not appear that the Hayes clamp was the cause of the neglect with which Wallace & Sons treated the Hayes lamp, seem to me to outweigh the doubts which arise from the shortness of its existence, and its permanent disappearance from a carbon pencil lamp."

"The case is that of the public, well known, practical use, in ordinary work, with as much success as was reasonable to expect at that stage in the development of the mechanism belonging to electric arc lighting, of the exact invention which was subsequently made by the patentee, and although only one clamp and one lamp were ever made, which were used together two and one-half months only, and the invention was then taken from the lamp, and was not afterwards used with carbon pencils, it was an anticipation of the patented device, under the established rules upon the subject. With a strong disinclination to permit the remains of old experiments to destroy the pecuniary value of a patent for a useful and successful invention, and remembering that the defendants must assume a weighty burden of proof, I am of the opinion that the patentee's invention has been clearly proved to have been anticipated by that of Hayes. *Coffin v. Ogden,* 18 Wall. 120; *Reed v. Cutter,* 1 Story 590; *Pickering v. McCullough,* 104 U. S. 310 ; Curtis on Patents 89-92."

"The bill, so far as it relates to the clamp patent, is dismissed."

We have examined carefully the evidence in this case relied upon by the plaintiffs to show that the clamp arrangement of

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Hayes was not a perfected invention, but was merely an abandoned experiment, and we have arrived at the conclusion that Judge Shipman's views on the subject are correct. They are well and accurately expressed, and we could not add to their force by a prolonged discussion of what is purely a question of fact.

The cases of *Coffin v. Ogden* and *Pickering v. McCullough,* cited by Judge Shipman, are enforced by the case of *Hall v. Macneale,* 107 U. S. 90 . This latter case meets also the objection made by the appellants that the mechanism of the Hayes clutch was concealed from view, and the further objection that it would not operate as perfectly as that of the Brush invention. In *Hall v. Macneale,* speaking of the anticipating safes, this Court said:

"The invention was complete in those safes. It was capable of producing the results sought to be accomplished, though not as thoroughly as with the use of welded steel and iron plates. The construction and arrangement and purpose and mode of operation and use of the bolts in the safes were necessarily known to the workmen who put them in. They were, it is true, hidden from view, after the safes were completed, and it required a destruction of the safes to bring them into view, but this was no concealment of them, or use of them in secret. They had no more concealment than was inseparable from any legitimate use of them."

It is contended by the appellants that notwithstanding the prior existence of the Hayes apparatus as a perfected invention, claims 5 and 6 of the reissue are sustainable, because each of them is limited to an "annular clamp." It is urged that the clamp of the patent is a ring which surrounds a cylindrical rod, and that the rod in the Hayes apparatus was square or rectangular, and was surrounded by a rectangular clamp. But it is quite apparent that claims 5 and 6 of the reissue would, if the patent were valid, be infringed by the manufacture and use of the patented apparatus with a rectangular carbon rod surrounded by a rectangular clamp. Such an apparatus might be inferior in perfection and utility to the cylindrical rod with the ring clamp, but it would still embody the principle of the

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invention, carried out by equivalent means. The improvement, if any, in the use of the circular clamp over the rectangular clamp was only a question of degree in the use of substantially the same means.

We are of the opinion that the decree of the circuit court must be affirmed, and it is so ordered.